## OTHER SPECIALIZED CENTERS

he Office of Basic Energy Sciences operates several other user facilities which serve to meet specialized needs of the scientific-community Included among these specialized facilities are:

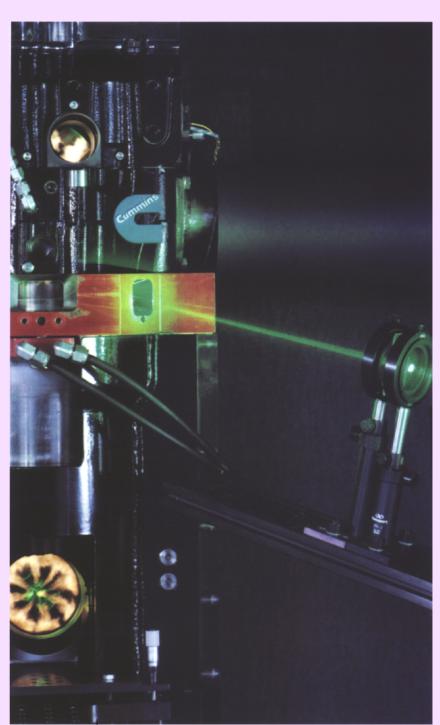
The Combustion Research Facility at the Sandia National Laboratory in California, where sophisticated laser techniques areemployed to understand the chemistry and physics of combustion processes.

The Surface Modification and Characterization Research Center at Oak Ridge National Laboratory, which employs ion beam techniques to implant various ionic species in solids, to modify surfaces, and to create certain non-equilibrium materials.

The Materials Preparation Center at the Ames Laboratory, Iowa, which specializes in the preparation, characterization and purification of rareearth, alkaline-earth, and refractory materials that are not easily available.

The James R. MacDonald Laboratory at Kansas State University, which uses accelerators to create highly charged ions for the study of ion-atom collisions and the atomic and molecular physics of these highly charged atoms.

The Pulse Radiolysis Center at the University of Notre Dame, which provides an intense electron pulse from an accelerator to create a highly excited, short-lived intermediate chemical state to understand various chemical reaction processes.



Lasers measure an operating diesel engine. Combustion Research Facility